IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Scott LaDell Vance	)	
	)	
Application No.: 10/709,345	)	Group Art Unit: 2618
	)	
Filed: April 29, 2004	)	Examiner: Wen Wu Huang
	)	
Title: DEVICE AND METHOD FOR HANDS-FREE PUSH-TO-TALK FUNCTIONALITY	)	

Commissioner for Patents
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APPELLANT'S BRIEF IN COMPLIANCE WITH 37 CFR 41.37

I. Real Party in Interest

Sony Ericsson Mobile Communications AB is the real party in interest.

II. Related Appeals and Interferences

There are no other appeals or interferences, known to the Appellants, or Appellants' legal representatives, which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

III. Status of Claims

Claims 1, 4-5, 9-14, 22, 26-31, 33, 35-37 and 41-45 are pending. Claims 2-3, 6-8, 15-21, 23-25, 32, 34, 38-40 and 46-48 have been cancelled. Claims 1, 4-5, 9-14, 22, 26-31, 33, 35-37 and 41-45 stand rejected by the July 25, 2008 final rejection. The July 25, 2008 final rejection of claims 1, 4-5, 9-14, 22, 26-31, 33, 35-37 and 41-45 is being appealed herein.

IV. Status of Amendments

There were no amendments filed after the final office action of July 25, 2008. Applicants chose to proceed directly with this appeal. All previous papers filed by Applicants have been entered.

V. Summary of Claimed Subject Matter

Embodiments of the present invention are related to a mobile communications device (e.g. a cell phone) having hands-free push-to-talk functionality using a tilt sensor. The hands-free push-to-talk functionality allows a user to talk to another person by activating a transmit mode of the mobile device. To enable the transmit mode of the hands-free push-to-talk functionality, the tilt sensor is tilted more than a certain angle. When the tilt sensor is tilted, an accelerometer in the tilt sensor senses a change in the direction of force due to gravity on the tilt sensor. This allows a user to wear a headset and activate the hands-free push-to-talk functionality by simply nodding the users head. For example, a nod down (and hold the head down) will tell the mobile device to be in transmit mode and a nod up (i.e. back to normal position) will tell the mobile device to stop transmitting. There is no device in the prior art which teaches such hands-free push-to-talk mobile device.

Claims 1, 22, 31, and 37 are independent claims that stand rejected under the same art. Claim 1 is an independent device claim for hands-free push-to-talk functionality according to one embodiment of the present invention. The first element of claim 1 is directed to "a hands-free push-to-talk sensor or switch including at least one of an air pressure sensitive switch and a tilt sensor for sensing a change in a direction of force due to gravity on the tilt sensor when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle, wherein the hands-free push-to-talk sensor or switch is operable by at least one of the air pressure sensitive switch sensing a change in air pressure and the tilt sensor sensing a change in the direction of force due to gravity on the tilt sensor when the tilt sensor is tilted more than the predetermined angle from the zero or normalized angle." This element is shown at element 102 of Figure 1, elements 306-308 of Figure 3, Figure 4B, and elements 504-506 of Figure 5, and discussed at paragraphs [0017], [0028], [0029], [0034] and [0035] of the originally-filed specification. The second element of claim 1 is directed to "means to control operation of a communications device

in response to signals from the push-to-talk sensor or switch, wherein the push-to-talk sensor or switch comprises the tilt sensor, wherein a transmit mode of the communications device is activated in response to the tilt sensor being tilted more than the predetermined angle from the zero or normalized angle of the direction of force due to gravity for a predetermined time duration." This element is shown at element 104 of Figure 1 and discussed in the originally-filed specification at paragraph [0018].

Claim 4 is dependent from claim 1 and recites "means for maintaining the communications device in the transmit mode in response to at least one of detecting a voice signal or the tilt sensor being tilted more than the predetermined angle after a selected time delay." Claim 4 is shown in the originally-filed specification at element 104 of Figure 1, elements 208-210 of Figure 2, and elements 310-312 of Figure 3 and discussed in the originally-filed specification at paragraphs [0018], [0026], and [0028].

Claim 9 is also dependent from claim 1. Claim 9 recites "the push-to-talk sensor or switch comprises the air pressure sensitive switch, wherein a transmit mode of the communications device is activated in response to the user blowing on the air pressure sensitive switch with an air pressure greater than a preset air pressure." Claim 9 is illustrated in the originally-filed specification at Figures 5-6 and discussed at paragraph [0037].

Claim 10 depends from claim 9. Claim 10 recites "means for maintaining the communications device in a transmit mode in response to at least one of detecting a voice signal or the air pressure greater than the preset air pressure caused by the user blowing on the air pressure sensitive switch after a selected time delay." Claim 10 is illustrated in the originally-filed specification at Figures 5-6 and discussed at paragraph [0036].

Claim 14 is dependent from claim 1 and recites "a headset, wherein the push-to-talk sensor or switch is mounted to the headset." This claimed feature is shown at Figures 4A and 6 and discussed at paragraph [0029].

Claim 22 is an independent method claim for hands-free push-to-talk functionality according to another embodiment of the present invention. The first element of claim 22 is directed to "detecting at least one of a tilt angle caused by a change in a direction of force due to gravity on a tilt sensor when the tilt sensor is tilted by more than a predetermined angle from a zero or normalized angle for a predetermined time duration, or air pressure." This element is

shown as element 102 of Figure 1, elements 306-308 of Figure 3, Figure 4B, and elements 504-506 of Figure 5, and discussed at paragraphs [0017], [0028], [0029], [0034] and [0035] of the originally-filed specification.. The second element of claim 22 is directed to "controlling operation of a communications device in response to detecting a presence or absence of at least one of the tilt angle caused by the change in the direction of force on the tilt sensor due to gravity when the tilt sensor is tilted by more than the predetermined angle from the zero or normalized angle for the predetermined time duration, or the change in air pressure." This element is shown as element 104 of Figure 1 and discussed in the originally-filed specification at paragraph [0018] of the originally-filed specification.

Claim 31 is an independent method claim for hands-free push-to-talk functionality according to another embodiment of the present invention. The first element of claim 31 is directed to "providing a hands-free push-to-talk sensor or switch including at least one of an air pressure sensitive switch, and a tilt sensor for sensing a change in a direction of force on the tilt sensor due to gravity when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle for a predetermined time duration, wherein the hands-free push-to-talk sensor or switch is operable by at least one of the air pressure sensitive switch sensing a change in air pressure and the tilt sensor sensing a change in the direction of force on the tilt sensor due to gravity when the tilt sensor is tilted more than the predetermined angle from the zero or normalized angle for the predetermined time duration." This element is shown as element 102 of Figure 1, elements 306-308 of Figure 3, Figure 4B, and elements 504-506 of Figure 5, and discussed at paragraphs [0017], [0028], [0029], [0034] and [0035] of the originally-filed specification.. The second element of claim 31 is directed to "providing means to control operation of a communications device in response to signals from the push-to-talk sensor or switch." This element is shown as element 104 of Figure 1 and discussed in the originally-filed specification at paragraph [0018] of the originally-filed specification.

Claim 37 is an independent claim of computer-readable medium having computer-executable instructions for performing a method for hands-free push-to-talk functionality according to another embodiment of the present invention. Computer-readable medium having computer executable instructions is discussed in the specification at paragraph [0038] and illustrated at elements 134, 126, and 132 of Figure 1. The computer executable instructions

perform the above-identified method and the first element of such method is directed to "detecting at least one of a tilt angle caused by a change in a direction of force on a tilt sensor due to gravity when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle for a predetermined time duration, or air pressure." This element is shown as element 102 of Figure 1, elements 306-308 of Figure 3, Figure 4B, and elements 504-506 of Figure 5, and discussed at paragraphs [0017], [0028], [0029], [0034] and [0035] of the originally-filed specification.. The second element of the method performed by the computer executable instructions is directed to "controlling operation of a communications device in response to detecting a presence or absence of at least one of the tilt angle caused by the change in the direction of force on the tilt sensor due to gravity when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle for the predetermined time duration, or the change in air pressure." This element is shown as element 104 of Figure 1 and discussed in the originally-filed specification at paragraph [0018] of the originally-filed specification.

VI. Grounds of Rejection to be Reviewed on Appeal

1. Whether claims 1, 12-14, 9-14, 22, 26, 31, 33, 36, 37 and 41 are unpatentable under 35 USC § 103(a) as unpatentable over U.S. Patent No. 3,586,798 to Holmes (hereiafter "Holmes") in view of U.S. Patent Application Publication Number 2004/0243416 to Gardos (hereinafter "Gardos");
2. Whether claims 4, 5, 27 and 42 are unpatentable under 35 USC § 103(a) as unpatentable over Holmes in view of Gardos and in further view of U.S. Patent No. 5,101,504 to Lenz (hereinafter "Lenz"); and
3. Whether claims 9-11, 28-30, 35 and 43-45 are unpatentable under 35 U.S.C. §103(a) over Holmes in view of Gardos, further in view of Lenz, yet further in view of U.S. Patent No. 4,426,733 to Brenig (hereinafter "Brenig"), and still yet further in view of U.S. Patent No. 6,594,632 to White (hereinafter "White")

VII. Arguments

Claims 1, 12-14, 22, 26, 31, 33, 36, 37, and 41 were rejected under 35 U.S.C. §103(a) as being unpatentable over Holmes (U.S. Patent 3,586,798; hereinafter "Holmes") in view of

Gardos (U.S. Publication No. 2004/0243416; hereinafter "Gardos"). Applicant first submits these references are non-combinable. Holmes discloses a conventional switch disposed on a user's chest and a control lever located below a user's chin so that when the user lowers his chin, the control arm is pushed toward the user's chest closing the contacts in the switch body, as shown in FIG. 2 of Holmes. In contrast, Gardos discloses a "speech-recognition system" that employs an accelerometer to determine head gestures, such as a nod or shake. See Gardos, paragraph [0017]. As described in paragraph [0026] of Gardos, the purpose of the invention of Gardos is:

> ". . . to increase the accuracy of an acoustic speech recognition program 160 running on a computer 108. For example, certain values of the head-nod parameter indicate that the spoken word is more likely to have a positive connotation, as in "yes," "correct," "okay," "good," while certain values of the head-shake parameter indicate that the spoken word is more likely to have a negative connotation, as in "no," "wrong," "bad." As another example, if the speech recognition program 160 recognizes a spoken word that can be interpreted as either "year" or "yeah", and the head action parameter indicates there was a head-nod, then there is a higher probability that the spoken word is "yeah."

Additionally, Gardos in paragraphs [0033] - [0035], recites:

> "[0033] ...The head orientation and motion sensor 186 generated head action parameters based on signals from accelerometers contained in sensor 186. The lip position parameters and head action parameters are transmitted wirelessly to a computer 194.
> [0034] ...Computer 194 combines the encoded speech signals and the lip position and head action parameters, and transmits the combined signal to a computer 196 at a remote location through network 192.
> [0035] ... Computer 196 also synthesizes an animated talking head 200 on a display 202. The orientation and motion of the talking head 200 are determined by the head action parameters. The lip positions of the talking head 200 are determined by the lip position parameters."

Accordingly, Gardos teaches sensing the head action, encoding and transmitting the head action parameters to a computer at a remote location to control a talking head on a display as clearly described by Gardos and illustrated in Figure 4. A person of ordinary skill in the art would not be motivated to combine the talking head control system for improved speech recognition of Gardos with the body-activated switch of Holmes.

Further, Holmes clearly teaches moving the user's chin to operate a switch residing on the user's chest which does not move. Replacing the switch of Holmes with the accelerometer of

Gardos would clearly render the Holmes' invention inoperative. If the control switch of Holmes is replaced by the accelerometer of Gardos, the accelerometer located on the user's chest would not detect head movement of a user to operate the switch, as required by Holmes in FIG. 2 and column 2, lines 67-75. Thus, Holmes would no longer operate as intended rendering these references non-combinable. For all of these reasons, Applicant respectfully submits that one skilled in the art would not have been motivated to combine the speech recognition system of Gardos with the chin-operated switch device of Holmes.

On Page 4 of the Final Office Action, the Examiner states "one of ordinary skill . . . would have replaced the tilt sensor of Holmes with the tilt sensor of Grados for the push-to-talk device of Holmes. . . ." However, on page 19 in the same Final Office Action the Examiner admits that:

> "one of ordinary skill in the art . . . would **not** place the motion senor of Grados at the chest of the user of Holmes. . . Placing the motion sensor of Grados on the chest of the user of Holmes is **nonsensical and unreasonable**." (emphasis added, Final Office Action dated 7/25/08, page 19, 2nd paragraph)

The Examiner has simply not shown how Holmes and Gardos can be combined. Applicant is at a complete loss as to what the alleged resulting combination of Holmes and Gardos would be. Applicant submits that a *prima facie* case of obviousness has simply not been made. Applicant further submits that the combination of Holmes and Gardos is based on the use of impermissible hindsight and is only obvious if applicant's disclosure is used as a template for the combination.

Applicant also submits that, even if Holmes and Gardos could be properly combined, the resulting combination still would not teach all of the features of Applicant's claims. Claim 1 recites:

> "a hands-free push-to-talk sensor or switch including at least one of an air pressure sensitive switch and a tilt sensor for sensing a change in a direction of force due to gravity on the tilt sensor when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle. . .

In rejecting this feature of claim 1, the Office Action relies on column 2, lines 29-35 of Holmes. However, Holmes, in column 2 beginning at line 29, recites:

> "[d]isposed upon base 11 is a microphone control switch indicated generally at 17. This switch includes a switch body 20 which is disclosed

> as being of the microswitch type characteristically including pressure-sensitive contacts. The switch body 20 may be of conventional switch construction having a normally open set of contacts one of which being on a flexible element for biased closing against a stationary contact. The closable or movable contact of the present switch body 20 is closed upon inward travel of a pushbutton 21, the button having a normally extended off position as shown in FIG. 2. Overlying the button is a plate 22 with a U-shape mounting bracket 22A hingedly mounted at 23 by a pin to the switch body 20, as been seen in FIG. 3. Further detailed description of the switch body 20 is believed unnecessary as such switch body structure is well known in the switch art." (emphasis added)

Applicant respectfully submits that Holmes does not teach or suggest a hands-free push-to-talk sensor or switch including at least one of an air pressure sensitive switch and a tilt sensor for sensing a change in a direction of force due to gravity on the tilt sensor when the tilt sensor is tilted more than the predetermined angle from the zero or normalized angle. Additionally, Holmes does not teach or suggest that the hands-free push-to-talk sensor or switch is operable by at least one of the air pressure sensitive switch sensing a change in air pressure and the tilt sensor sensing a change in the direction of force due to gravity on the tilt sensor when the tilt sensor is tilted more than the predetermined angle from the zero or normalized angle. As recited above, Holmes requires that his control switch 17 is operated by a wearer lowering his head so that the control lever contacts and manually operates the pushbutton 21, as shown in Figure 2 of Holmes. Thus, the control switch of Holmes is not a "tilt sensor," and is not "tilted more than the predetermined angle from the zero or normalized angle," as suggested by the Office Action.

Additionally, claim 1 recites:

> ". . . means to control operation of a communications device in response to signals from the push-to-talk sensor or switch, wherein the push-to-talk sensor or switch comprises the tilt sensor, wherein a transmit mode of the communications device is activated in response to the tilt sensor being tilted more than the predetermined angle from the zero or normalized angle of the direction of force due to gravity for a predetermined time duration."

In rejecting claim 1, the Office Action cited column 2, lines 67-75 of Holmes, which recites:

> "As viewed in FIG. 2 the switch control arm 26 is shown in broken lines moved to a position whereat the button 21 has been depressed to close the contacts in switch body 20 energizing the microphone 16. Also in broken lines is the inclined head position causing such closure. Further control arm movement resulting from jaw

> movement during speaking is shown in dashed lines. Such further movement by control arm 26 is permitted by the resilient nature of the control arm material and the hinged mounting thereof at 23."

Accordingly, Holmes is only discussing that a user's head pushes down on the control arm to depress the pushbutton and does not disclose a tilt sensor being tilted more than the predetermined angle from the zero or normalized angle of the direction of force due to gravity "for a predetermined time duration," as recited in claim 1. In fact, nowhere does Holmes even mention any predetermined time duration.

As previously discussed, Gardos teaches detecting head motions to more accurately detect what a person has said, such as for example a head-nod indicating the spoken word "yeah" rather than "year" (paragraph [0026] of Gardos) or to control movement of a talking head at a computer at a remote location (paragraphs [0033]-[0035] as discussed above). Applicant respectfully submits that Gardos also does not teach or suggest the features of the embodiment of the present invention as recited in claim 1.

For all of above reasons, Applicant respectfully submits that claim 1 is patentably distinguishable over Holmes and Gardos whether considered individually or combined, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of independent claim 1 is respectfully requested.

Regarding the rejection of claims 12-14, these claims recite additional features which further patentably distinguish over Holmes in view of Gardos. For example, claim 14 recites the push-to-talk device of claim 1 further comprises "a headset, wherein the push-to-talk sensor or switch is mounted to the headset." In rejecting claim 14, the Office Action recited:

> ". . . the combination of Holmes and Grados also teaches the device of claim 1, further comprising a headset (see Grados, fig. 1, headset 100), wherein the push-to-talk sensor or switch is mounted to the headset (see Grados, fig. 2, sensor 112)."

Accordingly, the Office Action is somehow suggesting that the control switch of Holmes (the Office Action previously cited the control switch of Holmes as the "push-to-talk" sensor) is mounted to the headset of Gardos. Clearly, this is nonsensical and not taught in Gardos. One skilled in the art would not mount the control switch of Holmes to the headset of Gardos. Additionally, neither Holmes nor Gardos teaches of a "push-to-talk sensor or switch" or mounting a "push-to-talk sensor or switch" to a headset. Applicant respectfully submits that in

no way does the combination of Holmes and Gardos teach of a "push-to-talk sensor or switch" being mounted to a headset. Accordingly, Applicant respectfully submits that claim 14 is patentably distinguishable over Holmes in view of Gardos, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 14 is respectfully requested.

Additionally, claims 12-14 depend either directly or indirectly from independent claim 1. Because of this dependency, these claims contain all of the features of independent claim 1. Therefore, these claims are also submitted to be patentably distinguishable over Holmes in view of Gardos, and reconsideration and withdrawal of the 35 U.S.C. §103 rejections of claims 12-14 is respectfully solicited.

Turning now to the rejection of independent claim 22 under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos, claim 22 recites:

> ". . . detecting at least one of a tilt angle caused by a change in a direction of force due to gravity on a tilt sensor when the tilt sensor is tilted by more than a predetermined angle from a zero or normalized angle for a predetermined time duration, or air pressure . . . ."

As previously discussed, Holmes and Gardos are non-combinable. Indeed, one skilled in the art would not have resorted to the speech recognition system of Gardos to solve the problem of controlling operations of a push-to-talk functionality by detecting a tilt angle caused by a change in a direction of force due to gravity on a tilt sensor when the tilt sensor is tilted by more than a predetermined angle from a zero or normalized angle for a predetermined time duration. Also, as previously discussed, even if Holmes and Gardos were combined, the resulting combination would no longer operate as intended. Indeed, if the control switch of Holmes is substituted with the accelerometer of Gardos, the accelerometer would no longer detect the head movement because the accelerometer would be located on a user's chest. If head movement is not detected, then the combination of Holmes and Gardos would not control operation of the device and thus, the combination would no longer operate as intended. As such, the references are non-combinable and the 103 rejection of this claim should be withdrawn.

Additionally, claim 22 recites similar features similar to independent claim 1. Therefore, claim 22 is respectfully submitted to be patentably distinguishable over Holmes in view of Gardos for the same reasons as discussed with respect to claim 1. Reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 22 is, therefore, respectfully requested.

Regarding the rejection of claim 26 under 35 U.S.C. §103(a) as being anticipated by Holmes in view of Gardos, these claims recite additional features which further patentably distinguish over Holmes in view of Gardos. Additionally, claim 26 depends directly from independent claim 22, and by virtue of that dependency, contains all of the features of independent claim 22. Therefore, claim 26 is also submitted to be patentably distinguishable over Holmes and Gardos for the same reasons as discussed with respect to claim 22. Reconsideration and withdrawal of the Section 103 rejection of claim 26 is respectfully solicited.

With respect to the rejection of independent claim 31 under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos, claim 31 recites similar features to independent claim 1. Therefore, independent claim 31 is respectfully submitted to be patentably distinguishable over Holmes in view of Gardos for the same reasons as discussed with respect to claim 1. Reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 31 is, therefore, respectfully requested.

Turning now to the rejection of claims 33 and 36 under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos, these claims recite additional features which further patentably distinguish over Holmes in view of Gardos. Additionally, claims 33 and 36 depend directly from independent claim 31. As a result of this dependency, claims 33 and 36 include all of the features of independent claim 31. Therefore, claims 33 and 36 are also submitted to be patentably distinguishable over Holmes in view of Gardos, and reconsideration and withdrawal of the Section 103 rejection of these claims is respectfully requested.

With regard to the rejection of independent claim 37 under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos, claim 37 recites similar features to independent claim 22. Therefore, independent claim 37 is submitted to be patentably distinguishable over Holmes in view of Gardos for the same reasons as discussed with respect to independent claim 22. Reconsideration and withdrawal of the Section 103 rejection of independent claim 37 is respectfully solicited.

With respect to the rejection of claim 41 under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos, these claims cite additional features that further patentably distinguish over Holmes in view of Gardos. Claim 41 depends directly from independent claim 37. Because of this dependency, claim 41 contains all of the features of independent claim 37.

Therefore, claim 41 is also submitted to be patentably distinguishable over Holmes in view of Gardos, and reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claim41 is respectfully requested.

Claims 4, 5, 27 and 42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos and further in view of U.S. Patent No. 5,101,504 to Lenz (hereinafter "Lenz"). These claims recite features which patentably distinguish over the cited documents. For example, claim 4 recites:

> "means for maintaining the communications device in the transmit mode in response to at least one of detecting a voice signal or the tilt sensor being tilted more than the predetermined angle after a selected time delay."

In rejecting claim 4, the Office Action recited column 3, lines 31-35 and lines 40-43 of Lenz, which recite:

> "In the most common two-way radios where the switch must be depressed as long as the person is talking and transmitting, the wearer can comfortably keep his shoulder raised for an extended period such as a minute while talking, all without affecting use of his hands and head.
> . . .In order to indicate to the wearer when he has operated the switch, the switch is constructed so that it creates an easily heard "click" noise both when it is closed and when it is opened again."

Accordingly, Lenz merely discloses a switch that is constructed so that it creates a "click" noise. The Final Office Action on page 21 asserted that the time to hear the "click" noise is a selected time delay. Applicant disagrees. As clearly taught by Lenz, the switch is constructed to create the "easily heard click noise" so the operator knows when the switch is closed and opened. The "click" in Lenz occurs only after the switch is already in transmit mode. This feature of Lenz does not teach or suggest a time delay as provided by claim 4.

Further, neither Lenz, nor Holmes and Gardos show any recognition for the problem solved by the feature of the present invention as provided in claim 4, namely maintaining the communications device in the transmit mode while the user is speaking (voice signal) and during brief interruptions of the user speaking less than the selected time delay unless the sensor is being tilted more than the predetermined angle after the selected time delay, as provided by claim 4. Lenz clearly teaches that the user has to keep his shoulder raised while talking as indicated in the

recitation above. Neither Lenz nor Holmes and Gardos teach or suggest a "tilt sensor being tilted more than the predetermined angle after a selected time delay."

Additionally, claims 4 and 5 depend directly from independent claim 1. Because of this dependence, claims 4 and 5 are submitted to include all of the features of claim 1. Applicant respectfully submits that Lenz adds nothing to the teachings of Holmes and Gardos so as to render claim 1 unpatentable. For all of the reasons discussed above, Applicant respectfully submits that claims 4 and 5 are patentably distinguishable over Holmes in view of Gardos and Lenz, and reconsideration and withdrawal of the 35 U.S.C. §103 rejections of claims 4 and 5 are respectfully requested.

Regarding the rejection of claims 27 and 42 under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos and further in view of Lenz, claims 27 and 42 recite features similar to claims 4 and 5. Additionally, claim 27 depends directly from independent claim 22 and claim 42 depends directly from independent claim 37. Because of these dependencies, claims 27 and 42 include all of the features of the referenced independent claims. Applicant respectfully submits that Lenz adds nothing to the teachings of Holmes and Gardos so as to render independent claims 22 and 37 unpatentable. For all of these reasons, claims 27 and 42 are respectfully submitted to be patentably distinguishable over Holmes, Gardos and Lenz, and reconsideration and withdrawal of the Section 103 rejection of claims 27 and 42 is respectfully solicited.

Claims 9-11, 28-30, 35 and 43-45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Holmes in view of Gardos, further in view of Lenz, yet further in view of U.S. Patent No. 4,426,733 to Brenig (hereinafter "Brenig"), and still yet further in view of U.S. Patent No. 6,594,632 to White (hereinafter "White"). These claims recite features which patentably distinguish over the cited patents. For example, claim 9 recites:

> ". . . the push-to-talk sensor or switch comprises the air pressure sensitive switch, wherein a transmit mode of the communications device is activated in response to the user blowing on the air pressure sensitive switch with an air pressure greater than a preset air pressure"

In rejecting claim 9, the Office Action cited column 2, lines 18-19 of Brenig, which recites "a microphone or other transducer is provided for receiving audible verbal phrases spoken by a human operator." Accordingly, Brenig discloses a microphone in a speech recognition system.

Brenig does not teach or suggest a pressure sensitive switch nor does Brenig teach or suggest that a transmit mode of the communications device is activated in response to the user blowing on the air pressure sensitive switch with an air pressure greater than a preset air pressure as provided by the embodiment of the present invention recited in claim 9.

Additionally, in rejecting claim 9, the Office Action cited White. However, White also only teaches speech recognition and does not teach or suggest a user blowing on an air pressure sensitive switch.

Claim 10 recites:

> ". . . means for maintaining the communications device in a transmit mode in response to at least one of detecting a voice signal or the air pressure greater than the preset air pressure caused by the user blowing on the air pressure sensitive switch after a selected time delay."

In rejecting claim 10, the Office Action cited Brenig. However, as stated above, Brenig only discusses speech recognition and does not disclose a means for maintaining the communications device in a transmit mode in response to at least one of detecting a voice signal or the air pressure greater than the preset air pressure caused by the user blowing on the air pressure sensitive switch after a selected time delay.

Claims 28-29, 35, and 43-44 recite similar features to claims 9 and 10 and are allowable for the same reasons presented above. Additionally, claims 9-11 depend from independent claim 1, claims 28-30 depend from independent claim 22, claim 35 depends from independent claim 31, and claims 43-45 depend from independent claim 37. Because of these dependencies, claims 9-11, 28-30, 35 and 43-45 include all of the features of the referenced independent claims and any intermediate claims. Applicant respectfully submits that Brenig and White add nothing to the teachings of Holmes and Gardos so as to render independent claims 1, 22, 31 and 37 unpatentable. For all the reasons discussed above, Applicant respectfully submits that claims 9-11, 28-30, 35 and 43-45 are patentably distinguishable over Holmes, Gardos, Lenz, Brenig and White, whether considered individually or combined.

Furthermore, Applicant submits that it is incumbent on the Office to view Applicant's claimed invention as a whole. As such, certain individual features from the cited references may not be arbitrarily chosen (while equally arbitrarily discarding other disclosed features) to merely lump together disparate features of different references as a mosaic in an attempt to meet the

features of the rejected claims. Thus, the Office is not allowed to pick and choose just certain parts of different references and combine them. As such, Applicant submits that the combination of Holmes, Gardos, Lenz, Brenig and White is based on the use of impermissible hindsight and is only obvious if Applicant's disclosure is used as a template for the combination. Furthermore, the references are in different arts, the inventions are completely unrelated and, absent Applicant's own disclosure, there is no reason to make the combination suggested by the Office. Therefore, claims 9-11, 28-30, 35 and 43-45 are respectfully submitted to be patentably distinguishable over Holmes, Gardos, Lenz, Brenig and White, and reconsideration and withdrawal of the Section 103 rejection of claims 9-11, 28-30, 35 and 43-45 is respectfully solicited.

Conclusion

For at least the above reasons, the Examiner has failed to show that every element of any claim is present in the art cited. Applicants believe they have responded to all of the concerns raised by the Examiner. Therefore, Applicants respectfully submit that claims 1-7 and 19 are in condition for allowance. Accordingly, reversal of the rejections of claims 1-7 and 19 is respectfully requested.

Respectfully submitted,

Date: 1/05/09

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VIII. Claims Appendix

The following is a clean copy of the claims involved in this appeal.

1. A device for hands-free push-to-talk functionality, comprising:

a hands-free push-to-talk sensor or switch including at least one of an air pressure sensitive switch, and a tilt sensor for sensing a change in a direction of force due to gravity on the tilt sensor when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle, wherein the hands-free push-to-talk sensor or switch is operable by at least one of the air pressure sensitive switch sensing a change in air pressure and the tilt sensor sensing a change in the direction of force due to gravity on the tilt sensor when the tilt sensor is tilted more than the predetermined angle from the zero or normalized angle; and

means to control operation of a communications device in response to signals from the push-to-talk sensor or switch, wherein the push-to-talk sensor or switch comprises the tilt sensor, wherein a transmit mode of the communications device is activated in response to the tilt sensor being tilted more than the predetermined angle from the zero or normalized angle of the direction of force due to gravity for a predetermined time duration.

4. The device of claim 1, further comprising means for maintaining the communications device in the transmit mode in response to at least one of detecting a voice signal or the tilt sensor being tilted more than the predetermined angle after a selected time delay.

5. The device of claim 1, further comprising means for switching the communications device to one of a receive mode or standby mode in response to an absence of at least one of detecting a voice signal or the tilt sensor being tilted more than the predetermined angle after a selected time delay.

9. The device of claim 1, wherein the push-to-talk sensor or switch comprises the air pressure sensitive switch, wherein a transmit mode of the communications device is activated in

response to the user blowing on the air pressure sensitive switch with an air pressure greater than a preset air pressure.

10. The device of claim 9, further comprising means for maintaining the communications device in a transmit mode in response to at least one of detecting a voice signal or the air pressure greater than the preset air pressure caused by the user blowing on the air pressure sensitive switch after a selected time delay.

11. The device of claim 9, further comprising means for switching the communications device to one of a receive mode or standby mode in response to an absence of at least one of detecting a voice signal or the air pressure greater than the preset air pressure after a selected time delay.

12. The device of claim 1, wherein the communications device is a wireless communications device.

13. The device of claim 1, wherein the communications device is one of a radio, a cellular phone, a cordless phone, a personal digital assistant and a computer.

14. The device of claim 1, further comprising a headset, wherein the push-to-talk sensor or switch is mounted to the headset.

22. A method for hands-free push-to-talk functionality, comprising:

detecting at least one of a tilt angle caused by a change in a direction of force due to gravity on a tilt sensor when the tilt sensor is tilted by more than a predetermined angle from a zero or normalized angle for a predetermined time duration, or air pressure; and

controlling operation of a communications device in response to detecting a presence or absence of at least one of the tilt angle caused by the change in the direction of force on the tilt sensor due to gravity when the tilt sensor is tilted by more than the predetermined angle from the zero or normalized angle for the predetermined time duration, or the change in air pressure.

26. The method of claim 22, further comprising activating a transmit mode in the communications device in response to detecting the tilt sensor being tilted more than the predetermined angle from the normalized angle for the predetermined duration.

27. The method of claim 22, further comprising:

maintaining the communications device in the transmit mode in response to at least one of detecting a voice signal or detecting the tilt sensor being tilted more than the predetermined angle after a selected time delay; and

switching or maintaining the communications device in one of a receive or standby mode in response to an absence of at least one of a voice signal or detecting the tilt sensor being tilted more than the predetermined angle after the selected time delay.

28. The method of claim 22, further comprising detecting an air pressure greater than a preset air pressure being blown on an air pressure sensitive switch by the user.

29. The method of claim 28, further comprising activating a transmit mode in the communications device in response to detecting the air pressure greater than the preset air pressure being blown on the air pressure sensitive switch by the user.

30. The method of claim 29, further comprising:

maintaining the communications device in the transmit mode in response to at least one of detecting a voice signal or the air pressure greater than the preset air pressure after a selected time delay; and

switching or maintaining the communications device in one of a receive or standby mode in response to an absence of at least one of a voice signal or the air pressure greater than the preset air pressure after the selected time delay.

31. A method of making a device for hands-free push-to-talk functionality, comprising:

providing a hands-free push-to-talk sensor or switch including at least one of an air pressure sensitive switch, and a tilt sensor for sensing a change in a direction of force on the tilt

sensor due to gravity when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle for a predetermined time duration, wherein the hands-free push-to-talk sensor or switch is operable by at least one of the air pressure sensitive switch sensing a change in air pressure and the tilt sensor sensing a change in the direction of force on the tilt sensor due to gravity when the tilt sensor is tilted more than the predetermined angle from the zero or normalized angle for the predetermined time duration; and

providing means to control operation of a communications device in response to signals from the push-to-talk sensor or switch.

33. The method of claim 31, wherein providing the push-to-talk sensor or switch comprises:

providing the tilt sensor; and

adapting the tilt sensor to cause activation of a transmit mode in the communications device in response to the tilt sensor being tilted more than a predetermined angle from a normalized angle of the direction of force due to gravity for the predetermined time duration.

35. The method of claim 31, wherein providing the push-to-talk sensor or switch comprises:

providing the air pressure sensitive switch; and

adapting the air pressure sensitive switch to cause activation of a transmit mode in the communications device in response to the pressure sensitive switch detecting an air pressure greater than a preset air pressure being blown on the pressure sensitive switch by the user.

36. The method of claim 31, further comprising:

providing a headset; and

mounting the push-to-talk sensor or switch in the headset.

37. A computer-readable medium having computer-executable instructions for performing a method, comprising:

detecting at least one of a tilt angle caused by a change in a direction of force on a tilt sensor due to gravity when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle for a predetermined time duration, or air pressure; and

controlling operation of a communications device in response to detecting a presence or absence of at least one of the tilt angle caused by the change in the direction of force on the tilt sensor due to gravity when the tilt sensor is tilted more than a predetermined angle from a zero or normalized angle for the predetermined time duration, or the change in air pressure.

41. The computer-readable medium having computer executable instructions for performing the method of claim 37, further comprising activating a transmit mode in the communications device in response to detecting the tilt sensor being tilted more than the predetermined angle from the normalized angle for the predetermined duration.

42. The computer-readable medium having computer executable instructions for performing the method of claim 37, further comprising:

maintaining the communications device in the transmit mode in response to at least one of detecting a voice signal or detecting the tilt sensor being tilted more than the predetermined angle after a selected time delay; and

switching or maintaining the communications device in one of a receive or standby mode in response to an absence of at least one of a voice signal or detecting the tilt sensor being tilted more than the predetermined angle after the selected time delay.

43. The computer-readable medium having computer executable instructions for performing the method of claim 37, further comprising detecting an air pressure greater than a preset air pressure being blown on an air pressure sensitive switch by the user.

44. The computer-readable medium having computer executable instructions for performing the method of claim 43, further comprising activating a transmit mode in the communications device in response to detecting the air pressure greater than the preset air pressure being blown on the air pressure sensitive switch by the user.

45. The computer-readable medium having computer executable instructions for performing the method of claim 44, further comprising:

maintaining the communications device in the transmit mode in response to at least one of detecting a voice signal or the air pressure greater than the preset air pressure after a selected time delay; and

switching or maintaining the communications device in one of a receive or standby mode in response to an absence of at least one of a voice signal or the air pressure greater than the preset air pressure after the selected time delay.

IX. Evidence Appendix

None

X. Related Proceedings Appendix

None